Legal Notices.

IN PURSUANCE of an order of the Surrogate of the County of New York, notice is hereby given to all persons having claims against ANDREW McLEAN, late of the City of New York, manufacturer, deceased, to present the same, with vouchers thereof, to the subscriber, at the office of John M'Cahill, Esq., No. 7 Nassau-st., in the City of New York, on or before the 20th day of February next.—Dated New York, the 18th day of August, 1852. MARY McLEAN, Administratrix.
au19 law6mTh

IN PURSUANCE of an order of the Surrogate of the County of New York, notice is hereby given to all persons having claims against MARTIN SILBER, late of the City of New York, gentleman, deceased, to present the same with vouchers thereof to the subscriber, at his residence, No. 101 Allen-st., in the City of New York, on or before the thirtieth day of April next.—Dated New York, the 27th day of October, 1852.
o28 law6mTh* WILLIAM B. SILBER, Administrator.

IN PURSUANCE of an order of the Surrogate of the County of New York, notice is hereby given to all persons having claims against CHARLES E. VAN AULEN, late of the City of New York, deceased, to present the same, with vouchers thereof, to the subscriber, at his residence, No. 123 West 22d-st., in the City of New York, on or before the 1st day of February next.—Dated New York, the 28th day of July, 1852.
jy29 law6mTh* WILLIAM C. VAN AULEN, Administrator.

IN PURSUANCE of an order of Jesse C. Smith, Esq., Surrogate of the County of Kings, notice is hereby given, according to law, to all persons having claims against JOHN CLARK, late of the City of Brooklyn, deceased, that they are required to exhibit the same, with the vouchers thereof, to the subscriber, John Dikeman, at his office in the City of Brooklyn, on or before the 15th day of July next.—Dated, January 5, 1853.
ja6 law6mTh* WILLIAM CLARK, JOHN DIKEMAN, } Administrators.

IN PURSUANCE of an order of the Surrogate of the County of New-York, notice is hereby given to all persons having claims against the estate of GEORGE M. STOUT, late of the City of New-York, deceased, to present the same, with vouchers thereof to the subscriber, at his place of business, No. 247 Broadway, in the City of New-York, on or before the second day of March next.—Dated New-York, the first day September, 1852.
s2 law6mTh* JAMES D. STOUT, Administrator.

IN PURSUANCE of an order of the Surrogate of the County of New-York, notice is hereby given to all persons having claims against CHARLES FIELDING, late of the City of New-York, coachmaker, deceased, to present the same with vouchers thereof to the subscriber, at the Coach Factory of FIELDING BROTHERS, in 41st-st., near the 3d-av., in the City of New-York, on or before the 20th day of March next (1853.) Dated New-York, the 20th day of September, 1852.
s23 law6mTh MARGARET FIELDING, Administratrix.

IN PURSUANCE of an order of the Surrogate of the County of New-York, notice is hereby given to all persons having claims against WILLIAM CHARDAVOYNE, late of the City of New-York, deceased, to present the same with vouchers thereof, to the subscribers, at their office, No. 134 Cherry-st., in the City of New-York, on or before the 21st day of February next.—Dated, New York, the 11th day of August, 1852.
THOMAS C. CHARDAVOYNE, GEORGE M. CHARDAVOYNE, } Executors.
au12 law6mTh*

IN PURSUANCE of an order of the Surrogate of the County of New-York, notice is hereby given to all persons having claims against JANE MITCHELL, late of the City of New-York, single woman, deceased, to present the same, with vouchers thereof to the subscriber, at his office, No. 16 South-st., in the City of New-York, on or before the seventh day of May next.—Dated, New York, the third day of November, 1852.
n4 law6mTh* JOHN H. REDFIELD, Executor.

IN PURSUANCE of an order of the Surrogate of the County of New-York, notice is hereby given to all persons having claims against ADOLPHUS MENKE, late of the City of New-York, deceased, to present the same, with vouchers thereof, to James Gridley, Esq., at his office, No. 59 Nassau-st., in the City of New-York, on or before the first day of August next.—Dated, New-York, the 26th day of January, 1853.
j27 law6mTh DOROTHY MENKE, HENRY MENKE, } Administrators, &c.

NOTICE of DISTRIBUTION.—Notice is hereby given, that the proceeds of the sale of the Real Estate of PETER A. HORN, late of the City of New-York, deceased, intestate, lately made under the order of the Surrogate of the County of New-York, will be distributed according to law, at the Surrogate's Office, in the City of New-York, on the first day of February next, at ten o'clock in the forenoon of that day, when all persons having claims or demands against said estate will present them to said Surrogate, with their proofs or vouchers.
d16 6w A. W. BRADFORD, Surrogate.

SUPREME COURT, KINGS COUNTY.—Samuel Willets, Trustee, &c., for Henry Powell, against John Cathart, James H. Pulis, the Second Williamsburgh Building and Savings Association, William C. Smith and Augustus Campbell.—Summons for relief.—(Com. not Ser.)—To the Defendant WILLIAM C. SMITH: You are hereby summoned and required to answer the complaint in this action, which will be filed in the office of the Clerk of the County of Kings, at the City Hall in the City of Brooklyn, on the 28th day of December, 1852, and to serve a copy of your answer to the said complaint on the subscriber, at his office, No. 61 Wall-st., in the City of New-York, within twenty days after the service of this summons on you, exclusive of the day of such service; and if you fail to answer the said complaint within the time aforesaid, the plaintiff in this action will apply to the Court for the relief demanded in the complaint.—Dated New-York, Dec. 20, 1852. K. H. BOWNE, Plaintiff's Attorney.
j13 law6wTh

SUPREME COURT—Francis B. Wallace against Samuel Carey.—To THE DEFENDANT: You are hereby summoned and required to answer the complaint in this action, which will be filed in the office of the Clerk of the City and County of New-York, at the City Hall in said City, and to serve a copy of your answer to the said complaint on the subscriber, at his office, No. 64 Wall-st., in the City of New-York, within twenty days after the service of this summons on you, exclusive of the day of such service; and if you fail to answer the said complaint within the time aforesaid the plaintiff in this action will take judgment against you for the sum of two hundred and fifty dollars, with interest from the first day of January, one thousand eight hundred and forty-eight, besides the costs of this action.—Dated, December 20, 1852.
D. C. RINGLAND, Plaintiff's Attorney.
The complaint in the above action was filed in the office of the Clerk of the City and County of New-York, at the City Hall in said City, on the 20th day of December, 1852.
d23 law6wTh D. C. RINGLAND, Plaintiff's Attorney.

THE PEOPLE of the STATE of NEW-YORK, by the grace of God, free and independent.—To all persons interested in the estate of ROYAL GURLEY, late of the City of New-York, deceased, as creditors, next of kin, or otherwise, send greeting: You and each of you are hereby cited and required personally to be and appear before our Surrogate of the County of New-York, at his office, in the City of New-York, on the 19th day of April next, at eleven o'clock in the forenoon of that day, then and there to attend the final settlement of the account of proceedings of GEORGE H. GURLEY and HANNAH GURLEY, as Administrators of the goods, chattels and credits of said deceased.
In testimony whereof, we have caused the seal of office of said Surrogate to be hereunto affixed. Witness, ALEXANDER W. BRADFORD, Esquire, Surrogate of our said County, at the [L.S.] City of New-York, the 14th day of January, in the year of our Lord one thousand eight hundred and fifty three.
ja20 law6mTh A. W. BRADFORD, Surrogate.

SUPERIOR COURT for the CITY of NEW-YORK.—Martha Jane Tatten by her next friend James E. Bailey, against Elbert Tatten. To ELBERT TATTEN the above named defendant. You are hereby summoned and required to answer the complaint in this action which has been filed in the office of the Clerk of this Court, at the City Hall of the City of New York, and to serve a copy of your answer to the said complaint on the subscribers, at their office, No. 51 Chambers st., in the said city, within twenty days after the service hereof, exclusive of the time of such service; and if you fail to answer the said complaint within the time aforesaid, the plaintiff will apply to the Court for the relief demanded in the complaint.—Dated, New York, Jan. 26, 1853.
WILLARD, SWEENY & ANDERSON, Attorneys for plaintiff,
j27 law6wTh No. 51 Chambers st., New York.

NEW-YORK TRIBUNE.

SKETCHES OF LECTURES.

Mechanic Arts, Education, &c.

BY HON. GEORGE BANCROFT.

Hon. GEORGE BANCROFT, the Historian and late Secretary of the Navy, on Tuesday evening delivered a lecture before the Mechanics' Institute, at their rooms, junction of Bowery and Division-st., relative to the progress of the Mechanic Arts, Common School Education, &c., in the United States.

The speaker, after assuring his audience that it afforded him the most unbounded gratification in appearing before them, in compliance with an invitation given him by the Institute, which he most cheerfully accepted of; he remarked that it was not the first time that he had visited their hall, for curiosity had partially led him thither, and he was exceedingly pleased to find that they had collected together so many valuable works and specimens of Mechanic Arts; that they had founded this establishment on so strong a basis, and formed so excellent a library, and established a school with an influence so widely extended.

He had not, however, prepared anything very elaborate in the way of an address; he had merely come forward to express a few of his thoughts in a familiar talk—or in other words, offer a few suggestions relative to the culture and public duties of Mechanics; but before proceeding further, he thought it would be well to inquire what constituted a Mechanic, and where was their dwelling place. He considered a Mechanic one who applied the powers of nature to the service of man in the largest view, and with regard to his dwelling place, he generally fashioned that himself according to the nature of his pursuits, but he viewed the town or the city especially as the home of the Mechanic. That it is in the town or city we find great gatherings of mechanical genius. In the city, mind is kept nearer to mind. In the city there are better opportunities for intercourse with each other, and friends are more numerous. Poets had said that God made the country, but man made the town. He did not think it very good poetry, nor very good common sense, for God is found in the town as well as in the country. In the country, prior to undergoing the culture of man, all is wild magnificence useless domain allowed to run waste. The country does not assume a beautiful aspect until man has devoted labor to its improvement; not until science had been called in to aid in this matter. The wonderful working of art and science was manifested by man in the country as well as in the city. He then went on to show how intimately we become bonded together and work harmoniously for the good of all, as illustrated by the fact that if you drop a letter into the Mail here with proper directions, it would find its way to your friend at the Hebrides, or the Bosphorus—at the foot of the Himmalaya Mountains, or far away at Puget's Sound. These facts, he said, lead him to inquire whether there was not evidence here of the great commandment, and the presence of God among us in the city; but if these were not considered clear and convincing proofs, he would say, enter the workshop of the mechanic and there witness the great powers that there display the secret laws of the Universe—laws by which you will see the mechanic in every act of life rendering a tribute to Divine Worship, and how various are its applications and wonderful in its extent. It was seen in the computation of forces and resistances; in the manner which man could control the elements of fire, earth, air, water, &c. In witnessing how water was checked in its course, and made to work its passage through the land to new points, and for special objects of utility; and how fire was made available in works of art; of the application of the powers of nature to the service of man; nothing had brought the subject more fully to his mind than the manner in which the products of the mines of Pennsylvania were brought on the railroad to our doors, as it were; there the power of gravity was fully illustrated, by the cars freighted with mineral wealth, without power and without guide, as it were, descend the mountains, and after discharging their cargoes are made to return for other burdens of like character, with clock-work regularity, all by the power of gravitation. Again, it might be observed, that within a few hours of New-York we could have access to some of the most beautiful scenery in the world. The magnetic fluid, too, a little particle of which was made to convey a message to a distant friend faster than the sun goes round the earth, and returns freighted with answer, sooner than the sun would have traveled the distance to which the message had been sent, illustrates the progress of science. He next alluded to visits he had paid to some of our large printing establishments, and witnessed the advancement of science in the working of one of these stupendous presses, capable of printing copies of newspapers at the rate of 20,000 per hour—six copies in a second; so that in twenty-four hours these machines would issue a greater mass of matter to be read than existed in the whole world, in all the libraries, before the invention of the printing-press. Mechanics, too, had now found out the means of controlling the air. A mechanic from another hemisphere, who had come among us, and cheered on by American capital, had recently boxed up the wind, and taught the cylinder to breathe it in and breathe it out, and thereby make the air itself to work, and ready to move his vessel round the globe. All this relates to city life—all the result of mechanical genius, brought to light by the influences of city enterprise.

The speaker then alluded to the many and important advantages of our common school system; as the foundation of the liberty we enjoy; that had it not been for the free school system there would not have been any united American revolution, nor would there have been a meeting under such happy and favorable auspices as the assemblage on this occasion. He felt as if he could not urge too earnestly the merits of this system of free schools, and it should be carried forward to its full development—not as a system of charity schools, but as a system of public establishments of elevated character. He, himself, had received his earliest instruction in the common schools of Massachusetts, and his son had also attended the free schools as long as they remained there. He was in favor of making our public schools such as our wealthy citizens would be glad to send their sons to, and there study side by side with those of a more humble sphere in society, where there would be no distinction of persons; where the master will be true and just in awarding merit, though that merit springs from the humblest cottage in the place.

There were those who objected to our free schools, because religion is not more prominently introduced into them. Again, there are those who are in favor of public schools, if placed under the direction of different denominations of religion, according to the wants of each particular sect or persuasion; but under our system, that is impossible. We know no difference in our schools. All, all are brothers—all, all are Americans there. We claim for each the liberty of his own conscience and creed; but when we stand before the law and the Constitution, we recognize one united people—and may it ever be so. It was, perhaps, passing too far; perhaps treading upon delicate ground, to offer his views on the subject, in giving expression of his doubts of the propriety of establishing free schools upon any such principles in this country. The Church of England is established by Act of Parliament, but here there is not a member of the Protestant Episcopal Church, of the Methodist Church, of the Calvinist Church, or even the Roman Catholic Church, that would not at once firmly protest against the establishment of any particular sect. Our institutions cannot oppress any on account of their religious views. We have a perfect right to think as we like, and thus we remain a united people. Take what is transpiring in Boston for example; in old Puritan Boston, where the number of Roman Catholics was formerly very limited indeed; but now a majority of children are born there of Roman Catholic parents, and therefore what an advantage it must be to them to enjoy all the privileges and blessings realized by ourselves. What an education is provided for their children; what a tribute for their good character. Those who have been driven from their homes by the European despots have no sooner stepped upon our shores than they are found bearing up all the Institutions which New-England has been capable of establishing; and he ventured to predict that our Roman Catholic friends would not separate from the Constitution, but that they will go along together in favor of establishing the system of public education. He contended that we must have Universities suited to mechanics; Universities in which they could learn those branches of education and science that would be of important advantage to them in after life. In connection with this point, he took pleasure in alluding to the munificent appropriation of Peter Cooper for the establishment of an Institution for the moral, mental and physical training of young mechanics, that the sum appropriated by him was almost sufficient to have endowed a University, and during the present winter, there had been talent as lecturers, enough to have composed the Faculty of such University. Indeed, another such a benevolent donation would prove ample means to secure a better education for our mechanics than is now attained at most of the Universities in Europe. The University at Gottenburg does not realize twice that amount, and the income of the University at Berlin does not exceed it. He also spoke in the highest terms of the Astor Library, and its anticipated importance to our respectable mechanics, inasmuch as Mr. Cogswell, to whom had been entrusted the duty of selecting the works for it, had succeeded in collecting many of great utility for the benefit of our artizans, comprising works on Architecture, Sculpture, Painting, &c., &c. In conclusion, the speaker recommended the people to demand of the authorities the laying out of Parks and Botanical Gardens similar to those in Europe, where they can go and breathe the pure fresh air of heaven and study the productions of nature.

Medical Jurisprudence.

BY JOEL PARKER, L.L. D.

PROFESSOR PARKER delivered an introductory lecture on Monday night at the N. Y. Medical College in Thirteenth-st., on Medical Jurisprudence. Shortly after 8 o'clock the lecturer made his appearance. He was accompanied by several of the faculty, as well as other gentlemen of the various departments of life. Amongst those present we noticed Judge Daly, Professors Green, Carnochan, Barker, Peaslee, Doremus, Davis and Whitaker. The Professor was introduced to the audience by George Wood, Esq., the President of the faculty of the College. He stated that Professor Parker, who was Professor of New-York College as also of Harvard College, would deliver a course of lectures on Medical Jurisprudence and he on the part of the faculty of the College, invited the young men studying for both the medical and legal professions, as also the members of these professions, and also the public generally to attend them, as he considered the knowledge which they would convey would be of great advantage to the community. Professor Parker then came forward. He said he proposed delivering a course of lectures on Medical Jurisprudence. Of one branch of this particular science his former avocations of life had given him some knowledge, but he could not pretend to much acquaintance with the other—the merely medical part, and for his treatment of both in conjunction, he claimed their indulgence for any imperfections they might discover. The subject is law and medicine as we meet them in the administration of the one and the practice of the other. These two, in conjunction with each other, had been called by some medical jurisprudence, and by others, for instance, Dr. Smith, of London, it had been designated variously, as State, political and forensic medicine, and medical police. The Lecturer here explained the views which different writers had taken of this subject, and said that the French called it *medicene legale*, which, though a proper designation in the French language could not well at least literally be translated into ours, as legal medicine would not express the idea intended, nor would the medicine of the law be appropriate, and it would at the same time be an awkward expression. He thought that in the course of his lectures he would be able to arrange this branch of medical science under a different heading from any under which it had been as yet treated, and his endeavor to do so would not he hoped be imputed to a desire for innovation or to vanity, but to the true cause, which was his desire to have it better understood than it was at present. To understand a subject perfectly it was necessary that it should be properly arranged and clearly treated. The term *medicene legale* on the Continent was more applicable to that science, as practiced there, than here or in England. On the death of persons there, there were regular officers of the medical profession whose business it was to hold investigations, and to take evidence as to the causes which might have led to death, and the reports made by physicians after holding such investigations was received as legal evidence in Courts of Law. The whole proceeding acquired a legal character because the Physician or Surgeon had then an official character. Neither in England nor in America does a like character attach itself to any reports made of enquiries into the cause of death. We have an officer called a Coroner, but his duty is to investigate in case of sudden death or deaths, produced by violence or poison and then all he does is only preparatory to a further investigation when his report is not received as evidence, but he himself must appear as a witness and be examined. In cases where a physician is examined, there is no difference made between him and any other ordinary witness, only in so far as his medical skill may entitle him to, but his testimony has no real legal effect or official character. It has been suggested that there should be a body of physicians officially appointed throughout this Union to hold legal investigations into the cause of death, but then the utility of this may well be doubted where party spirit so much prevails—and it is greatly to be feared that the fact of a physician's elections to such an office would not prove his fitness for it, nor his talent to discharge its duties. It might have an evil tendency in the profession itself and tend to lower its intellectual standard, and indeed a political graduate was not likely to prove a good scholar. Beside this, he feared there was a good deal of envy even in the medical profession though he never heard of any such existing in New-York. (Laughter.) Medical testimony alone does not cover the whole ground of the conviction between law and medicine. The law itself is divided into different branches, Municipal, Admiralty Mercantile Criminal &c., &., and unto each of these medical testimony Medical testimony enters. The Medical profession was also divided into different branches, Clinical Surgery, &c., and Veterinary with respect to the lower animals. In every branch medical testimony might at any time be required of the practitioner, and if he desired to appear in a respectable light (and it was said that medical men had a peculiar pride in doing all things they did well,) they would endeavor to know medical jurisprudence; for there was not a single branch of the medical science which might not at some time or another be brought to aid the law. Not a time from the cradle to the grave—from the embryo state to the last throb of life—whether conception has or has not taken place, the state of the foetus—and if death whether death has been produced by disease or violence. In cases of miscarriage, whether the infant was born alive, or whether unlawful means had been used to produce death, the validity of the much disputed hydrostatic test; and if the child breathed whether it was a simple respiration, giving up whatever of life it brought with it into the world, or whether the breathing was such as would induce to a belief of health and strength. Medical testimony came in again, in cases of violence, and in doubtful cases, all the testimony that the Courts of law could rely on with any certainty was medical testimony, as by that only could it be shown, from the nature of the wound, whether it was inflicted by the person's own hand, and was a case of suicide—or if inflicted by another, and then a case of homicide. Also, in cases of poison, and whether by ignorance, or design, or quackery, the latter of which is so prevalent that it is only wonderful how people could be so infatuated as to resort to it. Also, in cases of property, where lunacy can only be proved by medical men. And how often have men been put on trial for murder where lunacy has formed the only excuse; and whether the alleged lunacy was real or pretended could be only proved by medical testimony. The law is indebted to medical science for saving it from committing many sacrifices on innocent men; and it is certain that many have been sacrificed, and lost their lives, from a want of medical knowledge. The medical science is in turn indebted to the dead for a great deal of knowledge, for the grave has often given up its tenants to instruct them. Life and character depended often entirely on medical testimony, and it was then but proper and just that a knowledge of so important a branch of the medical science should be known among the profession. A physician may think it is only necessary that he should be able to ascertain the cause of diseases and apply a cure, but this was not sufficient. In many cases property to a large amount depended not alone in curing, but even on the state of the patient. The Lecturer then instanced different cases where property would be changed by the influence medical testimony. In case of the wife bringing property to the husband, and she died without issue, the property went back to her relations. When if it could be proved she ever had living issue, the husband would have a life interest in the estate. It would not do for the medical man to say on the trial, that he saw at once he could not restore life and he took no more trouble. He should have ascertained exactly the state of all whom he was called on to attend, as he knew little what importance might afterward be attached to his punctuality. He also referred to the case of Effie Deans, whose case the great Scottish novelist had taken for the foundation of a dreadful story and also to the case of a young woman, who was executed in Portsmouth, New-Hampshire, in 1769, on a charge similar to the Midlothian. By a statute of James the 1st, of England, any female suspected of concealing the birth of a child was deemed in law guilty of murder, unless they could prove that the child was not born alive. The evidence of medical men was not only important, but it was important that they should know the kind of testimony which was likely to be admitted into a court of law—for from a want of this knowledge medical men became confused between the contending advocates, he was often interrupted and corrected, became confused and did not give his testimony clear or with credit to himself. If he became testy with counsel, the matter was worse, for it was seldom that he came off victorious. Dr. Smith, of London, said he saw so many ill effects come from this want of legal knowledge in medical men, that he would rather teach it gratuitously to them, himself, than see them without it. The best witnesses were women and the worst lawyers, so that it could not be said that an extensive knowledge of the law was necessary to make a good witness. Yet some was necessary. The lecturer then went on to explain the importance of medical testimony, further on society, both as to cases of property and life—and in conclusion stated that he would in the course of his lectures introduce several cases, in which this testimony was of the greatest importance.

The President then announced that Professor Parker would continue his lectures every night during the week.

Chemical Relations of the Living World to the Atmosphere.

BY PROF. YOUMANS.

The Franklin Lectures were resumed at the Broadway Tabernacle on Monday evening, on which occasion Prof. YOUMANS delivered a most interesting lecture on the Chemical Relations of the Living World to the Atmosphere. There was a large and intelligent audience present, and at several points during his remarks he was applauded. He spoke for a little more than an hour, in a rapid but remarkably easy style. He was not too rapid to be distinctly heard; and being a master of the subject, and delighted with his theme, his lecture was interesting. Had he spoken a trifle slower it would have enabled those not so intimate with his subject to have been more impressed with his remarks. He accompanied his lecture with brilliant chemical experiments, and exhibited an ingenious chart to illustrate the subject.

In opening his lecture, Prof. Youmans said, that in the former series of this course the audience had accompanied the distinguished Lecturer on Astronomy on a tour of observation through the heavens; we now return to the earth to meditate for a time upon what is going on within and around us. From a consideration of orbs, distances and numbers, which overpower and confound us by their vastness, we turn to the opposite extreme of being—to atoms whose minuteness equally baffles conception. Astronomers say that the planetary system to which we belong is thousand of millions of miles in extent, and yet it is but a point in the stellar universe. Microscopists, on the other hand, inform us that some varieties of limestone are made up of the shells and shields of animals so minute that it would take forty-one thousand million to make a cubic inch. Each of these shells contain several different kinds of matter, and each of the little animals that inhabited it was composed of fluids and solids, organs and circulations. How far then below the reach of conception is the minuteness of ultimate atoms. Again astronomers tell us that in the heavens all is in motion, the planets swing through space and are self-revolvent—all is revolution. So, too, at the opposite extreme all is in motion, the atoms revolve from state to state, nothing is at rest. The astronomer further declares that it is through the action of vast hostile forces, antagonizing each other, a center-seeking and a center-flying force that the harmony and eternal permanence of the celestial systems are secured. If either should become predominant, the whole mechanism would rush to ruin. So also upon the surface of the earth a pair of hostile forces are engaged which antagonize and restrain each other—each conquering yet never victorious. The battlefield of these forces is the atmosphere, and life and organization, death and disorganization, are the products of their relation. These forces are automatic, self-adjusting, and may, therefore, play forever. The lecturer remarked that it was proper that Astronomy should come first. It accords with the historic order. It is the oldest of the sciences, and culminated as the grandest product of the human mind before Chemistry was born. The theory of Gravitation preceded the atomic theory by a hundred and fifty years. It also agrees with the order of the development of the human mind. As in the infancy of an individual, so in the infancy of the race. The attention is most strongly attracted by objects which powerfully impress the senses. Hence the stars became early objects of study. It was with matter and motion in the obvious and visible aspects, the relations of *masses* of matter that science first dealt. It was far later before men were prepared to investigate the subtler agents and profounder qualities of things. It is but recently that the systematic study of the occult and deeper qualities of matter has been commenced. It is this which distinguishes modern from ancient science. Mr. Youmans proceeded to remark that the history of Electricity furnishes an excellent illustration of this truth. This agent although pervading all matter lies buried beneath the surface, and as the ancients never passed beneath the surface they knew nothing of it. They knew that amber and the loadstone had the mysterious property of attracting other substances. Here were the seeds of science but there was no soil, and nothing further was known for 5,000 years. But in the early part of the last century the science of Electricity received an impulse forward through the labors of Grey of England and Du Fay of France. The latter philosopher published his researches in 1737. In 1746 the Leyden jar was invented, by which electricity may be accumulated and fired off in charges. The next year Peter Collinson, of London, sent Franklin, of Philadelphia, then 41 years of age, some electrical apparatus. He had never before paid attention to the subject. Yet in five years—in 1752, 100 years ago last June—he performed the boldest of all scientific experiments, and made the grandest of all scientific discoveries with his kite, which first established the identity of lightning and electricity, and lead to the use of the lightning rod. In 1790 we have the discovery of Galvanism, in 1800 the invention of the galvanic battery, and in 1807, when Galvanism was but 17 years old, Davy used it to revolutionize the vast science of chemistry. In 1820, Oersted discovered electro magnetism. Ampere's theory of magnetic currents followed in six months. Magneto electricity and thermo-electricity, both new sciences, followed in two years, and the electro magnetic telegraph of Prof. Morse, in 17 years. It was patented in 1837, just 100 years from the publication of Du Fay's experiments. This immense contrast of results is not due to any superiority of modern over ancient mind. There is probably no more native shrewdness and sagacity now than then. The ancient mind moved in a false direction; it occupied itself with frivolities of logic, rhetoric, dialectics, poetry, oratory and metaphysics, and neglected the systematic study of external nature. The world had been overshadowed by empires which rose and fell in succession—systems of mythology and philosophy came and went one after another—cities were built, and their foundations crumbled—the pyramids were built, and their builders forgotten before men had learned enough of the physical world to know that water running down hill may be used as a source of motive power. Water-mills were invented but 70 years before Christ. How, then, could people be expected to know anything of those more hidden and profound properties of matter which were much less apparent and more difficult of detection. These observations, said the lecturer, explain why it is that the phenomena of organization and the relations of plants and animals to the air were so lately elucidated and are still so generally unknown. For thousands of years people have been pumping air in and out of their systems from birth to death incessantly, yet how few know why. The present course of lectures will be devoted to this question. We shall have to take the air to pieces to see what it is made of, and inquire what are the conditions of its stability in composition. Has it always been as now? This inquiry will carry us to the source of soils. We must ask about the nature of vegetation, the production of foods, the changes they undergo in the kitchen, how they become parts of the animal body, and what then becomes of their elements? All these points must be touched upon before we can form any just idea of the uses of air in the human body. Chemistry alone can give us this information. Physiology is nothing without chemistry to explain the nature of the changes of atoms that take place within the body. A man in the course of a single year takes into his system 800 lbs. of oxygen gas, 1,000 lbs. of solid food and three quarters of a tun of water. These react upon each other chemically in the system, and thus life is perpetuated. Chemistry is called dull and dry, and is supposed to consist in the explosion of a few gases and the exhibition of pyrotechnic experiments. To a thoughtful person nothing can have higher interest. Much of its dryness is owing to the repulsive manner in which it is too often treated. In other branches of study we aid ourselves with pictures. Geography was a dry and unpopular study until maps came into use. The student must see the thing or a *representative* of it. We use pictures in Astronomy, Geology, Anatomy, and why not in Chemistry? The lecturer then called attention to a large and beautiful chart of atomic combinations, which gave great simplicity to the subject. He then spoke of the composition of the atmosphere, and said that in studying vegetable and animal chemistry we constantly meet with the same chemical substances which we find in the air. This makes the whole subject exceedingly simple. The air is said to extend 30 or 40 miles high, but this should not mislead us as to its quantity. The atoms of gases repel each other; they seem to hate each other, and would fly asunder, diffusing themselves throughout all space, but for gravity which attracts them down toward the surface of the earth. The force of gravity diminishes as we ascend, and therefore the particles of air are partially released from its grasp, and press further and further apart. The air is thinner, rarer and lighter as we go up. So in order to know how much there is, we must reduce it all to the density of that which we breathe, or at the level of the sea. If, by any cause it were pressed down from the top so as to have a uniform density, it would be but 4 miles high—scarcely covering the tops of the highest mountains. The lecturer then called attention to nitrogen-gas, which composes four-fifths of the air. Its leading property, he said, is hesitancy to enter into chemical union. Its attractions are feeble. It is slow to combine and quick to abandon its combinations. Gunpowder and the explosive fulminates, contain nitrogen in a solid combined state. In exploding, this with other gases escapes into a free gaseous condition—giving rise to mechanical force. Nitrogen is an element of foods, and of the animal body, nerves, muscles and tissues; these are all prone to decay, owing to the readiness with which nitrogen escapes. Oxygen gas which forms one fifth of the air, is, in all respects the opposite of nitrogen. Its attractions are powerful and it combines with a great number of substances—holding them firmly and thus forming stable compounds. It combines so energetically as to produce light, heat, and therefore mechanical force. It produces all combustion that we see. In burning a combustible body it destroys it, and is itself destroyed—that is combined—lost as oxygen. Eight-ninths of all waters, one-third of all rocks, stones and soil, and one half the weight of all living animals and plants consist of combined oxygen gas. 200 lbs. of oxygen combine with 84 lbs. (one bushel,) of coal, and generate sufficient mechanical power to raise eighty million pounds one foot high. The mechanical effect in this case measures the intensity of the attraction of a given quantity of oxygen gas for a proportionate quantity of carbon. Animals breathe this gas to destroy them. It does the same thing in the body that it does elsewhere. It can do but one thing—burn and destroy. In the production of power, the mechanism of the animal wears—dies by stone, and oxygen is the destructive agent. In starving to death a man is simply burned up by this gas which enters his body continually. Food is fuel—it resists the combustive influence of the air and thus saves the vital machine from destruction. If the earth were left to the action of its atmosphere alone, all that lives or can burn would be speedily consumed and ashes alone remain. But there is another power, the foe of oxygen, which continually antagonizes and defeats it—we will consider that force in a future lecture.

Prof. Youmans' second lecture will take place on Monday evening next, at the Tabernacle. He will then consider the compound constituents of the atmosphere and the way the air acts to form soils from rocks. It will be of a high order of interest.

☞ *The Luzerne Democrat* and *The Republican Farmer*, lately published at Wilkesbarre, Pa., have been purchased by S. S. Benedict, late of *The Carbondale Citizen*, and merged into one establishment *The Luzerne Union*.

☞ The bridges on the Baltimore and Ohio Railroad, between Cumberland and Wheeling, number *one hundred and fourteen*. One of them is 600 feet long, and is elevated 40 feet above the Monongahela River, which it spans.

☞ James A. Van Buren, a youth of 17, has mysteriously disappeared from the neighborhood of Clarksville, Ga. He was last heard of hunting in that vicinity Dec. 30. He is a son of J. Van Buren, of Clarksville.

☞ On the 18th inst., the woolen factory of Robert Turner, at Munnsville, was discovered to be on fire, and was burned to ashes with nearly all its contents. Loss $8,000; insured $4,000.

☞ They are getting a Clay Monument in New-Orleans, at a cost of $30,000, which is to be raised by subscription. A committee is engaged in collecting the names of subscribers.

☞ The number of meeting-houses of the Friends (Quakers) in 21 of our principal States and the District of Columbia, is 715, and the aggregate accommodation is stated at 283,023 seats.

☞ The last *La Grange* (Ga.) *Reporter* says that the La Grange Steam-mill was destroyed by fire on [illegible] 8th inst. Loss, $15,000. No insurance.